

EXHIBIT B

Report Summarizing the Opinion of Judi L. Durda Regarding the Sufficiency of Available Information for MDEQ to Identify Natural Resource Damage Claims Arising from the Release of Asbestos at Operable Unit 3 of the Libby Asbestos Superfund Site) (the “Durda Report”),



**Report Summarizing the Opinion of Judi L. Durda
Regarding the Sufficiency of Available Information for MDEQ
to Identify Natural Resource Damage Claims Arising from the
Release of Asbestos at Operable Unit 3 of the
Libby Asbestos Superfund Site**

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1. I was asked by W.R. Grace & Company (Grace) to opine on whether sufficient information exists for the Montana Department of Environmental Quality (MDEQ) to identify natural resource damage claims that may have arisen from the release of Libby amphibole asbestos at Operable Unit 3 (OU3) of the Libby Asbestos Superfund Site.
2. I am a vice president of Integral Consulting Inc., a science and engineering consulting firm specializing in health, environmental, and natural resource fields.
3. In 1986, I graduated from North Carolina State University, Raleigh, North Carolina, with an M.S. in Zoology and Toxicology. In 1982, I graduated Phi Beta Kappa, with distinction and special honors from George Washington University, Washington, DC. with a B.S. in Biology and Environmental Studies.
4. I am certified as a Senior Ecologist by the Ecological Society of America (ESA) and previously served two terms on ESA's Board of Professional Certification, established

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to ensure that professional ecologists have appropriate technical training and are committed to executing their work in an honest, accurate, and ethical manner.

5. By profession, I am a toxicologist and ecologist with more than 30 years of experience in the health and environmental science fields, working on behalf of both government and private clients. I specialize in using science and science-based strategies to address complex environmental and/or toxicological issues related to the manufacture, use, and disposal of chemicals, consumer products, pharmaceuticals, and hazardous and nonhazardous wastes. My specific experience includes natural resource damage assessment (NRDA), risk assessment, toxicological evaluations, and regulatory compliance support under a variety of federal and state programs and in related litigation.

6. In support of my report, I have reviewed and relied upon the following materials:

- a. MWH. 2016. Remedial Investigation Report for Operable Unit 3 Study Area. Libby Asbestos Superfund Site. Libby, MT. Revision 1, November 2016.

This report provides a comprehensive summary and analysis of the data collected and studies completed to evaluate the presence and distribution of Libby amphibole asbestos in OU3. It includes a summary of historical investigations conducted before the remedial investigation (RI) began in 2007, along with a summary of the results of sampling and analysis conducted during the RI to determine the presence of asbestos in a variety of environmental media, including surface water, soil, sediment, air, vegetation, fish, and mammals. It also includes a description of the land use, ecology, natural setting of the area, and surface water hydrology; a summary of the results of studies on aquatic toxicity and on the composition, condition, and habitat of the aquatic community; a histopathological examination of small mammals; and an evaluation of the human and ecological risks posed by asbestos.

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- b. Stantec. 2018. 2016 Remedial Investigation Report Addendum. Operable Unit 3. Libby Asbestos Superfund Site. Libby, MT. Final. September.

This report provides the results of additional studies designed to refine an understanding of the potential for exposure and risk to people engaged in different types of activities, provides an updated human health risk assessment, and includes a systematic wetland delineation study designed to characterize the type, permanence, and quality of these specific ecological habitats.
- c. U.S. Environmental Protection Agency (USEPA). 2014. Site-wide Baseline Ecological Risk Assessment, Libby Asbestos Superfund Site, Libby, Montana.
- d. USEPA. 2013. Baseline Ecological Risk Assessment for Non-Asbestos Contaminants. Operable Unit 3. Libby Asbestos Superfund Site. Libby, Montana.
- e. MWH. 2017. Wetland and Waters of the United States Delineation Report. Operable Unit 3 Study Area. Libby Asbestos Superfund Site. Libby, MT. August.
- f. Declaration of Keith N. Cole in Support of the Reply in Support of the Reorganized Debtor's Claim Objection Requesting Partial Allowance and Partial Disallowance of MDEQ Prepetition Claim (Substantive Objection).
- g. Montana Fish, Wildlife and Parks (MFWP) information sources:
 - Fishing Guide Mapper. (<http://fwp.mt.gov/gis/maps/fishingGuide/>)
 - Stream Access in Montana. (<http://fwp.mt.gov/fish/guide/access/streamAccess.html>)
 - Montana Statewide Angling Pressure 2015. (<http://fwp.mt.gov/fish/anglingData/anglingPressureSurveys/2015.html>)
 - Montana Statewide Fisheries Management. Program and Guide. 2019-2027. (<http://fwp.mt.gov/fishAndWildlife/management/fisheries/statewidePlan/default.html>)
 - Crucial Areas Assessment. (<http://fwp.mt.gov/fwDoc.html?id=41529>)
 - List of restrictions and closures for fishing access sites, fishing and waterbodies, hunting and trapping districts harvest status (<http://fwp.mt.gov/news/restrictions/>)
 - Montana sport fish consumption guidelines (<http://fwp.mt.gov/doingBusiness/reference/brochures/fish.html>)
 - List of open hunting lands. (<http://fwp.mt.gov/hunting/hunterAccess/public.html>)

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- Public Land Hunting Opportunities.
(<http://fwp.mt.gov/hunting/hunterAccess/public.html>)
 - Hunting regulations. (<http://fwp.mt.gov/hunting/regulations/>)
- h. Other hunting information:
- Kootenai National Forest Big Game Hunting Areas – Libby Area.
(<https://www.fs.usda.gov/recarea/kootenai/recreation/hunting/recarea/?recid=49890&actid=54>)
 - Phillips, J. Undated. High-country elk hunting in the fall. *Game and Fish*.
(<https://www.gameandfishmag.com/editorial/high-country-elk-hunting-right-now/189930>)
- i. Regional resource planning and use documents:
- U.S. Forest Service (USFS). 2014. Kootenai National Forest. Forest Plan Monitoring and Evaluation Report 2013 (and related previous reports).
 - USFS. 2015. Land Management Plan. Kootenai National Forest. Revised Land Management Plan.
(https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprd3826663.pdf)
 - USFS. Motor Vehicle Use Map. Kootenai National Forest. Libby Ranger District.
 - MFWP. 2004. Montana Statewide Elk Management Plan.
(<http://fwp.mt.gov/fishAndWildlife/management/elk/managementPlan.html>)
 - U.S. Fish and Wildlife Service (USFWS). Recovery Plan for the Coterminous United States Population of Bull Trout (*Salvelinus confluentus*)
(https://www.fws.gov/pacific/bulltrout/pdf/Final_Bull_Trout_Recovery_Plan_092915.pdf)
 - U.S. Army Corps of Engineers. 2015. Finding of No Significant Impact. Kootenai River Project Downstream of Libby Dam. Lincoln County, MT.
 - USEPA. 2014. Letter from USEPA Region 8 to Libby Area Technical Assistance Group.
(http://www.latag.org/index.php/reports/item/download/19_720034830a0def17703ec97c3ed15498)
 - Libby, Montana, trail information (<http://libbymt.com/outdoors/trails.htm>)
 - Article from *The Western News*. June 13, 2017.
(<http://www.thewesternnews.com/article/20170613/ARTICLE/170619985>)
Lincoln County Asbestos Resource Program (<http://lcarp.org/>)
- j. Regulations, Guidance, and General NRDA Literature:
- MDEQ. Circular DEQ-7. Montana Numeric Water Quality Standards.

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- 43 CFR Part 11. Natural Resource Damage Assessments.
 - Montana Comprehensive Environmental Cleanup and Responsibility Act (CECRA). §§75-10-705 through 728, MCA.
 - U.S. Department of the Interior (DOI). 2008. BLM Natural Resource Damage Assessment and Restoration Handbook. REL 1-1712.
 - Abt Associates. 2018. Pre-Assessment Screen: Smurfit Stone/Frenchtown Mill Site. Frenchtown, Montana. Prepared for the Montana Natural Resource Damage Program.
 - Israel, B., Marsten, B., and Daniel, L. 2019. Natural Resource Damage Assessment. A Guide to Litigating and Resolving NRD Cases. American Bar Association.
 - Unsworth, R., and Petersen, T. Undated. A Manual for Conducting Natural Resource Damage Assessment: The Role of Economics.
 - Boehm, P., and Ginn, T. 2013. The science of natural resource damage assessments. *Environmental Claims Journal* 25(3): 185-225.
 - Desvousges, W., Gard, N., Michael, H., and Chance, A. 2018. Habitat and resource equivalency analysis: a critical assessment. *Ecol. Econ.* 143(2018): 74-89.
 - Dunford, R.W., Ginn, T.C., Desvousges, W. 2004. The use of habitat equivalency analysis in natural resource damage assessments. *Ecol. Econ.* 48:49-70.
 - Gouguet, R., et al. 2009. Effective coordination and cooperation between ecological risk assessments and natural resource damages assessments: A new synthesis. *IEAM*. 5(4):523-534.
7. This is not an exhaustive or complete report on all aspects of potential natural resource damages at OU3. Grace has requested this report for the limited purpose of determining whether, and the extent to which, MDEQ can identify now potential natural resource damage claims arising from Grace's pre-petition (prior to April 2, 2001) conduct.
8. All facts and opinions set forth in this report are based on my experience in NRDA matters and my review of the materials set forth in the preceding paragraph, as well as

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on information supplied to me by employees of and/or professionals retained by Grace. If called upon to testify, I could and would testify competently to the facts and opinions contained herein.

I. Summary of Findings

9. Given the information and approaches commonly used to evaluate natural resource damages, I find that sufficient information is available for MDEQ to identify natural resource damage claims that may have arisen from the release of Libby amphibole asbestos at OU3 of the Libby Asbestos Superfund Site. I reach this finding based on the following key facts:
 - a. NRDA methodology is well documented and data needs based on this methodology can be clearly defined.
 - b. Environmental investigations and risk assessments within OU3 provide ample site-specific data to characterize site conditions, asbestos distribution, and the potential for natural resource injury.
 - c. Regional data and information concerning the type of natural resources, their distribution, and their use by human populations is available to support a damage assessment.
 - d. Commonly used models can be employed to estimate damages using the currently available information or information that can be readily obtained.
 - e. Montana has initiated or settled natural resource damage claims at other sites where the remedy was not complete, as is the case for OU3.

II. NRDA Definition and Methodology

10. Natural resource damages are defined under both federal and state law. Under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), natural resource damages are defined as “the amount of money sought by the natural

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resource trustee as compensation for injury, destruction, or loss of natural resources” (43 CFR §11.14 [l]) due to the release of a hazardous substance,¹ including assessment costs (42 U.S.C. §9607(a)). Under the Comprehensive Environmental Cleanup and Responsibility Act (CECRA), the state may recover damages for injury to, destruction of, or loss of natural resources caused by the release or threatened release of hazardous or deleterious substances, including assessment costs (§ 75-10-715 [2b] MCA).

11. Under both laws, natural resource damages are separate from the costs associated with the investigation and remediation of hazardous substances that may be present at a site. Also, under federal and state law, natural resource damages must be caused by a release of a hazardous (or deleterious) substance—not any physical alterations in habitat—and those damages must be such that they would not exist but for the release of such substance.
12. Natural resource damages are determined by defining the injury (i.e., measureable adverse change to resource quality or viability²) to the affected resource, identifying the lost services (i.e., physical and biological functions of the resource, including the human use of those functions³) that result from that injury, and assigning a value to that loss, often accomplished using tools such as habitat equivalency analysis or

¹ My opinion is specific to releases of hazardous substances rather than discharges of oil, which are not relevant in this matter.

² 43 CFR §11.14(v)

³ 43 CFR §11.14(nn)

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resource equivalency analysis, or using market-based or other economic tools. These tools are well developed and commonly used in natural resource damage proceedings.

13. Importantly, it is not merely the presence of a hazardous substance that results in natural resource damages. Rather, a natural resource must be in contact with the hazardous substance, that contact must be sufficient to result in a measurable adverse change (i.e., injury) in the affected resource, and that injury must be sufficient to cause a reduction in the services (benefits) provided by that resource. For example, if Libby amphibole asbestos is present in surface water, there are no damages unless that presence is sufficient to have reduced the ecological or human services provided by the surface water resource.
14. The United States Department of the Interior (DOI) has developed rules for identifying and estimating natural resource damages. Though not mandatory, the DOI rules provide a framework within which NRDA's can be pursued. These nonbinding rules have been in place since 1986 and amended several times since then, and have been followed by the state in natural resource damage cases at other sites in Montana.
15. The first step of the process outlined in the DOI rules is to conduct a Preassessment Screen (PAS), which is "a rapid review of readily available information" to "ensure that there is a reasonable probability of making a successful claim before any monies and efforts are expended in carrying out an assessment" (43 CFR § 11.23(b)). The rules outline a set of criteria for proceeding with a NRDA. The criteria potentially pertinent to OU3 are:

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- a. A release of a hazardous substance has occurred.
 - b. Natural resources for which the state can claim trusteeship have been or are likely to have been adversely affected by the release.
 - c. The quantity or concentration of the released hazardous substance is sufficient to potentially cause injury.
 - d. Data sufficient to pursue an assessment are readily available or can be obtained at a reasonable cost.
 - e. Response actions, if any, carried out or planned will not sufficiently remedy the natural resource injury without further action.
16. If the PAS indicates there is a reasonable probability for a successful claim, the natural resource rules outline a process for the damage assessment to document natural resource injury, service loss, and damages (43 CFR §§ 11.30-11.38).

III. Analysis of Sufficiency of Available Information to Support NRDA

17. There is and has been sufficient “readily available information” for MDEQ to determine whether a claim for natural resource damage at OU3 could and should be made and, if so, to assess the magnitude of that claim.
18. First, the types of data and other information needed to assess potential damages can be readily determined from the available guidance and literature. For example, as an initial step in NRDA, the DOI guidance for a PAS clearly outlines the types of information that should be considered when determining if a successful claim can be made. This can and could have been used by MDEQ to determine the types of information it needed to establish if there is a reasonable probability of making a successful natural resource damage claim associated with asbestos in OU3. Other

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guidance and literature identifies the type of information needed to further assess injury, service loss, and damage, if it is determined that there is a reasonable probability of making a successful claim. Thus, the available guidance and literature provide a clear roadmap of the types of information needed to pursue a claim.

19. Secondly, the RI has provided substantive site-specific information that can and could have been used to determine if claims should be pursued and, if so, the magnitude of those claims. It is my understanding that the information gathered was readily available or directly provided to MDEQ throughout the RI process. This information includes data from analysis of thousands of samples on the presence and distribution of asbestos in environmental media, including surface water, sediments, soils, vegetation, and aquatic and terrestrial wildlife. Additional RI studies provided other information relevant to NRDA, including the results of toxicity testing to evaluate the response of fish, aquatic invertebrates, and amphibians to OU3 environmental media; field surveys of fish and benthic macroinvertebrate communities to evaluate organism diversity and density; and habitat studies to understand the various habitat factors that affect organism diversity and density. This type of information is commonly used to assess natural resource damages and is directly relevant to an evaluation of any potential natural resource damages associated with asbestos in OU3. It is and has been available to MDEQ.
20. The ecological risk assessments conducted as part of the RI analyzed the available information and provide additional information that could have been considered by

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MDEQ in determining whether a natural resource damage claim could be made or can be pursued. Risk is not injury. Injury is defined in natural resource damage regulations as a measureable adverse change to resource quality or viability. Risk, however, can be considered the potential for that injury. If there is no risk to particular natural resources from a hazardous substance release, there is no potential for injury to those resources from the release, and if there is no injury, there is no potential natural resource damage claim for those resources.

21. USEPA issued the Final Site-Wide Baseline Ecological Risk Assessment (BERA) for Asbestos in December 2014. This risk assessment described the likelihood, nature, and extent of adverse effects on ecological receptors in all Libby Site OUs, including OU3, resulting from exposure to asbestos present in the environment. The Site-Wide Asbestos BERA concluded that the studies of fish, benthic invertebrates, and amphibians exposed to asbestos in surface water or sediment revealed no evidence of ecologically significant effects attributable to asbestos. Likewise, a study of mice exposed to asbestos in soil and duff in an area of high asbestos contamination revealed no evidence of effects attributable to asbestos. Overall, the studies indicated that ecological receptors are unlikely to be adversely impacted by asbestos released to the aquatic or terrestrial environments by previous vermiculite mining and milling activities. In short, there were no predicted risks. Therefore, there is no potential for injury to those resources.

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22. Even before the RI, MDEQ had or could have readily obtained the results of historical investigations conducted at the site prior to the initiation of the RI (some of which had occurred by 2001). These studies included information on the presence of Libby amphibole asbestos in surface water, sediment, soils, and tree bark, as well as aquatic community data at a station in the Kootenai River about a mile downstream of the confluence with Rainy Creek. The MDEQ could have considered this information in determining if a claim for natural resource damages in OU3 should be pursued for the studied resources.
23. Third, regional data and information concerning the distribution of natural resources in and around OU3, and their use by human populations are already compiled by the state or could be easily obtained to support any NRDA. Much of this information is compiled as part of the state's own resource management efforts and has been available in some form since the beginning of those programs. This type of information is directly relevant to an assessment of the degree to which human use of natural resources (e.g., hunting, fishing) in OU3 may have been affected by Libby amphibole asbestos. MDEQ has had the ability to use such information to determine whether a claim for natural resource damages at OU3 could be made and should be pursued.
24. Fourth, commonly used models can be employed to estimate damages using currently available information or information that can be readily obtained. For example, in its Response and Reservation of Rights of the State of Montana to the Substantive

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Objection (Response), the state identified loss of recreational fishing in Rainy Creek and Carney Creek as a potential natural resource damage. There are ample models and approaches available and commonly used in NRDA to assess economic damage associated with lost fishing opportunities. Literature on applicable economic models and approaches has been available for decades. The state's own data on fishing pressures and activity in waters throughout the state, including the Kootenai watershed, where the site is located, provide important information to support any assessment.

25. Finally, MDEQ need not wait until a remedy is put in place to identify natural resource damage claims that may have arisen from the release of Libby amphibole asbestos at OU3. The available information is adequate to identify and assess any past damages, and data analysis, models, and other tools can be used to identify and project any future damages. Further, the response actions to be selected by USEPA will be implemented to address any future threats to human health or the environment.
26. The state has initiated NRDA activities, including a PAS, at a site for which the RI is still underway (i.e., Smurfit Stone/Frenchtown Mill site). Similarly, in the past, the state has settled NRDA claims at sites before the RI has been completed, let alone before the remedy was in place (e.g., Anaconda Smelter and Silver Bow Creek sites). These actions provide additional support for my conclusion that there is no reason the state could not have moved much earlier to identify and pursue any natural resource

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damage claim associated with the release of Libby amphibole asbestos at OU3 of the Libby Asbestos Superfund Site.

27. With respect to each of the specific claims outlined in the Response (paragraphs 9(a) through 9(d)), I conclude that sufficient information is available for MDEQ to evaluate a potential claim, but that the available information indicates that no or negligible natural resource damages have accrued. Specifically, with respect to each allegation of potential damages outlined in paragraph 9 of the Response, I find:

- a. **Per Se Injury for Asbestos Maximum Contaminant Level (MCL) Exceedances in Surface Waters.** There are no damages accrued due to the presence of asbestos in surface water above the MCL. MCLs are developed to be protective of human health for people exposed to chemicals in drinking water. Libby amphibole asbestos has been detected in certain OU3 surface waters at concentrations above the MCL. However, none of those surface water bodies is used now as a source of drinking water, nor historically was any surface water body prevented from being used as a source of drinking water due to the presence of asbestos. Therefore, there has been no loss in services (human use) of the water and no damages have accrued. This determination can be reached now and could have been reached previously, prior to the initiation of the RI, given the fact that the pertinent surface water is not being used for drinking water.
- b. **Loss of Use for Recreational Fishing for Rainy, Carney Creeks.** Although angler access to areas near these creeks could be reduced by the gate and signage on Rainy Creek Road, the impact on this for reducing angler use of these creeks is likely low. For example, even if Rainy Creek Road was used, Carney Creek is most easily accessed via Grace property, which is posted for no trespassing, and therefore prevents legal access by anglers to this creek via this route. Additionally, although portions of lower Rainy Creek could be accessed from Rainy Creek Road without trespassing on Grace property, the conditions of the creek likely reduce its attractiveness to anglers. For example, the BERAs concluded that the overall density of trout in Rainy Creek is lower than in nearby creeks, largely due to less favorable habitat conditions. In addition, dense and overhanging vegetation would make angler access to lower Rainy Creek very challenging, further reducing the attractiveness of this location for recreational fishing. The overhanging vegetation, along with the culverts in the creek, also would make it physically difficult for an angler to traverse the creek to upstream locations. Given these factors, it is most probable that anglers would choose to

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fish in more accessible waters supporting a greater density of fish. Therefore, damages for recreational fishing losses in Rainy or Carney creeks, if any, are likely negligible.

- c. **Loss of Spawning Fishery Due to the Kootenai Development Impoundment Dam (KDID) and Other Rainy Creek Impoundments.** There are no compensable damages accrued due to the loss of spawning fishery due to the KDID and other impoundments. First, the ecological risk assessment reported that fish access from lower to upper Rainy Creek is blocked by hanging culverts present in lower Rainy Creek. The KDID does not affect this access. If the culverts and other barriers in lower Rainy Creek did not exist, the KDID could block fish passage from the lower to upper reaches of Rainy Creek. However, under this condition, it is the physical obstructions, not the presence of Libby amphibole asbestos, that block fish movement from lower to upper reaches. Any injury or service losses that might result from a physical barrier are not compensable damages under CERCLA or CECRA.
- d. **Loss of Hunting Opportunities in USFS Portions of OU3.** Damages due to loss of hunting opportunities are likely negligible. Although the presence of the gate and sign at Rainy Creek Road near Route 37 placed in the early 2000s could have made hunter access to certain portions of OU3 less convenient, I am not aware of any explicit prohibitions of hunting in OU3 by the state or other agency. The availability of hunting in other nearby areas provides alternative hunting opportunities. Further, based on the results of the human health risk assessment presented in the RI, there are no adverse health risks associated with hunting in OU3.

28. With respect to the state's position outlined in its Response that a full NRDA conducted in accordance with federal regulation would identify more MDEQ damage claims than were specifically identified in the Response, my opinion is that this position is not supportable. I reach this conclusion based on my initial analysis of the considerable amount of information collected historically and over the course of more than a decade of the RI, coupled with information on the nature, distribution, condition, and use of natural resources in OU3, and considering the tools, techniques, models and other analysis approaches commonly used for NRDA.

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IV. Conclusion

29. Given the information and approaches commonly used to evaluate natural resource damages, I find that sufficient information is available to allow the MDEQ to identify natural resource damage claims that may have arisen from the release of Libby amphibole asbestos at OU3 of the Libby Asbestos Superfund Site.
30. These actions could have been pursued well in advance of these current legal proceedings and would not be inconsistent with the timing of NRDA actions the state has taken at other sites.